Pro/file Updates

The Newsletter For ZX Pro/file Users

Vol. 1, No. 3 July 1984

AFTER THE FALL....

Bill Jones of Panama City, FL sent an interesting note. He says, "UPDATES has the potential of being a National Newsletter for Sinclair Computer Information. Looking further down the road, UPDATES could be a vehicle to start up a National Sinclair Computer Club."

Funny you should mention that, Bill. While UPDATES is definately not ever going to be a "general interest" sort of rag, I do see the need for some other publication to help fill the void left by SYNC cutting out. I am doing what I can to help out in this. Namely, I am publishing another newsletter devoted to a broad range of ZX/TS interests.

This newsletter is called THE SYNCWARE NEWS, a bimonthly journal for all Sinclair/Timex computer fanatics. Actually, SYNCWARE NEWS is not new. It has been around for the past year. What is new is my involvement in the publishing aspects of the journal. I hope to contribute whatever talent I have toward improving the format of SYNCWARE NEWS, broadening its scope, and boosting its circulation.

Since January we saw the Timex computer revolution take on all the characteristics of a classic Greek tragedy. Overnight we watched our sources of supplies and information dry up. It seems to me that the only people who didn't desert the computer were the ZX/TS owners themselves, and they (make that "we") were left standing saying, "Gee, what happened?"

Well I for one, firmly believe there is a whole lot more to be said about our lowly computers. SYNCWARE NEWS has assembled a huge collection of information about all ZX/TS machines which shall be published over the coming months. The complete spectrum of topics are covered: hardware projects, programming tips, product reviews, announcements, news, program listings, and tutorials on programming theory. We have something for every level of expertise--from rank amateur to cosmic.

To use the words of Bill Jones, SYNCWARE NEWS is "The Newsletter for Sinclair Information". We will do our utmost to keep the ZX/TS flame alive. But to insure success, we need subscribers. Now for the infamous bottom line:

For a one year subscription to SYNCWARE NEWS, send $16.95 (Visa/MC welcome) to:

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Tell your friends about SYNCWARE NEWS and ask them to subscribe too. With a large active lively readership, SYNCWARE NEWS will insure that our marvelous little machines will be around for quite some time to come.

PRO/FILE WORKS WITH COMPUSA DISK DRIVES TOO

Last issue there was an extended modification to run "ZX" with the AERCO disk drives. This time, Steve Cottrell of Allen Park, MI sends his modification to run the program on the COMPUSA disk drive.

According to Cottrell, after the "ZX" tape is loaded into the computer, break into the listing and change line 25 so that it reads:

```
25 IF X$="SAVE" THEN GOTO 3041
```

Then add new program lines 3041-3046

```
3041 SAVE "A:PROFILE1,P"
3043 CLS
3044 PRINT "DATA SAVED",,,,
3045 PAUSE 300
3046 GOTO 18
```

To put the program onto the disk initially, GOTO 17 and type SAVE at the Main Menu. Once it is saved, go back into the listing and change3041 to 3046 to the following:

```
3041 SAVE "A:PROFILE1,D"
3042 SAVE "A:PROFILE1,P"
3043 CLS
3044 PRINT "DATA SAVED",,,,
3045 PAUSE 300
3046 GOTO 18
```

Cottrell adds: At line 3041 you will note a SAVE statement that is the DOS of the COMPUSA disk system. This statement deletes the existing program. The next line, 3042, re-saves the program that has new data entered into it.

I included line 3044 to verify that a save has indeed taken place. One thing I should note is that the "DATA SAVED" stays on the screen when the Main Menu comes up. It goes away once PRO/FILE is entered into.

ZX PRO/FILE SAILS THE SEVEN SEAS....

D.A. Diemand HMC, USN writes, "I'm using Pro/File aboard ship with great success keeping track of the dental status of 278 personnel."

AND SPEAKING OF WATER.....

Peter G. Govus reports that his West Paterson, NJ home was flooded by 4 feet of water not long ago. At the bottom of the drink was his T/S1000. When the waters subsided, Govus put the air blower to his soggy machine. As soon as the thing was dried out he powered it up, and just like in the ads, the good old K-cursor popped right up. Its reassuring to know that the trusty TS can put up with such treatment especially in light of the fact that new ones are becoming scarcer than hens teeth.

NEW LIGHT ON THE MEMOTECH MEMORY MYSTERY

In UPDATES No. 1 I noted that several people experienced unusual behavior of their computers when the Memotech 16K ram pack was used to expand capacity to 32K.

This snowball turned into an avalanche as others added extra memory and other interfaces--particularly when a TS1500 was used as the base computer.

Bill Russell of Winky Board fame sheds some light on this common problem and gives a possible cure. Russell says:

One often overlooked cause of crashes in TS computers--especially when extra devices are plugged in or when a program is being run that uses virtually all available memory (like Pro/File does) is in the Z80 microprocessor itself. Timex computers employ a Z80 chip that is of such marginal quality that any extra load on its data or address lines simply cannot be handled.

If you run Pro/File and it crashes frequently for no apparant reason, try replacing the on board Z80 with one made by Intel or Mostek. I tried this and it ended almost all of my crashing problems; even many that I thought were caused by ram pack wobble.

GLARING ERRORS Dept.

In "Upgrading to Larger Memories Without Losing Data" (page 6, vol. 1, no. 1) step 7 of the instructions was incorrect.

Step 7 should read:

POKE 21342, PEEK 16434
POKE 21343, PEEK 16435
POKE 21344, 1
POKE 21345, PEEK 16434-3
POKE 21346, PEEK 16435

Now you should be able to upgrade to larger memories without losing any sleep.

HOW TO CONNECT PRO/FILE TO A 32K RAM PACK

To run a 32K version of "ZX", follow these instructions. First set RAMTOP by poking:

1. POKE 16388,255 and ENTER
2. POKE 16389,191 and ENTER
3. NEW and ENTER

Then LOAD the 16K version of "ZX". When the Main Menu pops up break into the listing by typing:

SHIFT 1, STOP, and ENTER

Press CLEAR and ENTER to remove the existing variables. Then add these new program lines:

```
4000 DIM D$(5000,4)
4010 LET L=PEEK 16400+256*PEEK 1
6401
4020 POKE L+1,37
4030 POKE L+2,78
4040 POKE L+3,1
4050 POKE L+4,34
4060 POKE L+5,78
4070 POKE L+6,0
4080 LET P=20
4090 LET S=1
4100 LET C1=3
4110 LET C2=11
4120 LET E=0
4130 LET Y$=""
4140 LET Q$=D$( TO 32)
4150 LET D$( TO 21)="*SEARCH IS
COMPLETE*"
4160 GO TO 17
```

After you double check for typos, press RUN 4000 and ENTER. The result is a 32K Pro/File that can store just under 20000 characters of data.

You may wonder why 32K can only hold 20000 bytes of data. If 16K can store 11000 characters, why can't 32K have 22000? The answer is you might very well be able to pack in a full 22000 bytes. However, a great many 32K memory systems act funny on the TS1000. To make matters worse, problems do not crop up until after you've added a substantial amount of data to the program. This is true only when you run Pro/File to the limit. If you hold back a few K of memory, these problems never appear. See the report from Bill Russell also in this issue.

ADDITIONAL SELECTIONS FROM THE DISPLAY OPTION MENU

Add these lines to Pro/File to eliminate many tedious unnecessary key presses. They incorporate into "ZX" much of the flexibility found in the new Pro/File 2068 program.

Working from the Display Option menu, you'll be able to enter every command obtainable from the Main ZX Menu. You could therefore, enter a new search, change the print format, add a new file, or make an AUTOSEARCH from the Display Options without the need to go back to the Main Menu first.

Three major benefits stand out. First, you can enter "A" to add a new file even when an existing file is already on the TV screen. It is possible, then, to duplicate files in memory just by entering "A" from the Display Options then pressing "C" to close the file. This saves time entering many files that are similar.

Second, you can change print format (DEFP) while you look at a file display. If DEFP were set to 1-5-1 and you see from a file display that line 7 needs printing, you can change print format to include line 7, print the file, and reset DEFP to its original value without leaving the file display.

Third, you can enter a new search command. Suppose you start a search for a file that contains a reference to a different file. Before, you had to go back to the Main Menu to enter the new search. Now, just enter the new search from the Display Options. No muss, no fuss.

Use techniques shown in previous UPDATES issues to reduce capacity by 150 bytes. Then add or alter the ZX Pro/File program to incorporate these lines:

```
 234 IF Y$="A" THEN GOTO 500
 245 GOTO 220*(Y$<>"R")-110*(Y$=
"")-190*(Y$="R")+30*(LEN Y$>1)
 250 LET X$=Y$
 255 GOTO 25
 500 IF B=1 THEN CLS
2015 RAND ((Y$="DEFP")+1)
2092 PRINT AT 15,0;C1-2;"-",C2;"
-";S
2095 LET Y=0
2100 GOTO 220*(PEEK 16434=2)
```

GOTO 17 to start running again and try out the enhancement. You'll notice that the prompts and menus are not as nicely layed out, but fancy menus extract their toll on total data capacity.

Unless you're a new Pro/File owner, you probably don't rely too heavily on prompts and menus anyway. Easier entry of commands more than offsets any inconvenience caused by a menu's brevity.

SPEEDLOAD and "ZX"

If you own SPEEDLOAD, a fastloader put out by Intercomputer, Inc., you'll be interested in this modification made by Alfred Revzin of Elmsford, NY. He writes:

The SPEEDLOAD cartridge works only with the TS1500. A program that normally loads and saves in 5 minutes will take only 20 seconds.

Load the Pro/File cassette in the usual way. Modify line 25 so it reads:

```
 25 IF X$="SAVE" THEN PRINT USR
8683
```

To save Pro/File, enter the SAVE command as called for in the Main Menu. Start the recorder, press enter. The save starts immediately. The screen pattern is different as is the one for the load.

Once the program is speed saved, you can speed load it by using the following command instead of the usual LOAD "ZX":

```
PRINT USR 8671
```

THE IDIOT's IDIOT LINE
by Irving Helbling

Despite the safeguards built into ZX Pro/File, I have managed to erase by mistake two pages of data. Consequently, I devised this Idiot's idiot line.

```
 556 IF Y=3 AND Y$="" THEN GOTO
800
 800 PRINT AT 1,0;"CONFIRM DELET
ION OF ENTIRE FILE Y/N"
 810 INPUT K$
 820 PRINT AT 1,0;Q$
 830 IF K$="Y" THEN GOTO 650
 840 GOTO 506
```

If you accidently press just ENTER when the edit cursor has stopped on the top file line, the above modification forces you to respond with either a "Y" or "N" to confirm deletion of the entire file. Press "Y" and its gone. Press "N" and you get another chance.

EDITING THE ASTERISK

Larry Wilson of West Palm Beach, FL writes:

When I initiate a search for "*", I find I am unable to EDIT the first file called up. This does not occur on subsequent files or if the search is for another item. Is there something I am overlooking?

You have discovered one of ZX PRO/FILE's idiosyncracies. If the first file you add to the database is something like:

```
*THIS IS TEST FILE 1
DATA A
DATA B
DATA C
```

you can get the file on the screen using "*" as a search command, BUT due to a quirk in the program, you can't press display option "E" to EDIT it.

In order to change this file you must start a new search for something else that will print this file. Any other search command will do: FILE 1, DATA A, DATA B, anything except the "*" that brings up the file could be used. Now when you press "E" the cursor starts blinking as it should.

The blame for PRO/FILE's failure to edit the first file when "*" is used as a search command can be attributed to line 232 of the BASIC. This line is supposed to send you off tc edit a file only if the SEARCH IS COMPLETE file is not printed on the TV.

The way it stands, line 232 is a bit overzealous in the way it guards the SEARCH IS COMPLETE file. It also protects the asterisk marking the start of the next file, and that is why you can't edit TEST FILE 1 when you use "*" to search with.

If you change 232 to:

```
 232>IF Y$="E" AND PEEK 16507+25
6*PEEK 16508<>6+PEEK 16400*256*P
EEK 16401 THEN GO TO 300
```

PRO/FILE's edit rou[illegible]e will work properly.

GEORGE ERICKSON'S ULTIMATE LOADING SOLUTION: BATTERIES

UPDATES has devoted considerable space to improving loading speed convenience and dependability. Disk drives, stringy floppies, and fast load-type programs all contribute greatly to these critical factors.

There is another solution to the loading problem which is often overlooked. That is, once you have the program in your computer, never take it out. Just leave the computer running 24 hours a day, 365 days a year.

Impossible, you say? Well, George Erickson, a manufacturer's representative for Canon micro floppy drives, hard disks, and other computer equipment, uses ZX PRO/FILE to maintain his sales data. Since last November his Timex has been running non-stop thanks to a battery power system he developed. Even when an April blizzard left Erickson's Ipswich, MA community without power for over 24 hours, his files remained safe inside his computer.

Erickson's bomb-proof power supply virtually eliminates all crashes caused by power line drop outs. It also eliminates about 90% of all overheating problems. When this power supply system is combined with modifications to fix RAM wobble, it ends just about every hardware related cause of computer failure. It now becomes possible to load the computer once and forget it.

The Erickson supply is comprised of 3 key elements. First a 12 volt automobile battery replaces the wall transformer that comes with the computer. Connected to this battery is the second element, a small trickle charger which keeps the battery from discharging completely.

The 12 volts that come from the battery is, by itself, too much for the computer to handle so a voltage regulator circuit--the third element--is added to reduce the 12 volts to just under 9 volts. This output voltage is fed into the Timex through its normal power input jack. The net effect is a super smooth double regulated power supply that is immune to even the worst power line glitches. It just won't quit even when the lights go out for extended periods. Over heating problems are practically wiped out because voltage going into the computer is lower than what the original transformer supplies.

You can build your own Erickson battery power supply using all new parts for about $60. By raiding your junk pile and getting a used battery, you could chop the price down to as low as $15. You can buy the regulator circuit ready made with case and cables for $40. You must still supply the battery and trickle charger. Order from Tom Woods, P.O. Box 64, Jefferson, NH 03583.

The regulator circuit that follows was built and tested by Pro/file UPDATES. It is based on Erickson's design. Here's what you need:

1-12 volt car battery (get it with removable vent holes so water can be added if needed)
1-12 volt trickle charger

2-Battery terminal studs with wing nuts
1-small utility cabinet
1-Roll 20 ga. 2 conductor cable
1-LM317 adjustable voltage regulator IC (Radio Shack #276 1778)
1-Semi conductor heat sink (Radio Shack #276 1363)
1-Fuse holder clip (#270 739)
1- 1.5 Amp fuse (#270 1274)
2-Miniature 1/8 inch Phone plugs (#274 287)
2-Miniature Jacks (#274 251)
1-4.7µf electrolytic capacitor (#272 1024)
1- .1 µf capacitor (#272 1069)
1-270Ω resistor
1-1.6kΩ resistor
1-4 to 6 lug solder terminal strip

Construction Hints....

Follow the steps below. Use care when you bend the leads of the LM317 chip to fit the lugs of the terminal strip. They won't take repeated bending without breaking.

When you choose the terminal strip, note that one lug doubles as a mounting bracket to the enclosure. Use this lug as a common ground lug. DO NOT connect any pins of the LM317 to this lug. It follows, then, that you will need at least 3 lugs on one side or the other of the ground lug. If you can't find the exact strip you need, you can always use a larger one and cut off the unused lugs with nippers.

Avoid crossed wires and short circuits. Be sure the polarity of all inputs and outputs is correct before hooking up either the battery or computer.

STEP 1--Bend the two outside leads of the LM317 regulator so they fan out wide enough to fit in the lugs of the terminal strip.

STEP 2--Secure the chip to the strip by bending over the ends of each lead enough to hold it in place. DON'T solder anything yet.

STEP 3--Secure the .1µf capacitor between the ground lug and pin 1 of the regulator. Bend the leads to hold it in place.

STEP 4--Connect the 270Ω resistor between pins 2 and 3 of the regulator.

STEP 5--Hitch the 1.6KΩ resistor between lug 3 of the regulator and the ground lug.

STEP 6--Connect the 4.7µf electrolytic capacitor between lug 2 and the ground. Be sure the negative lead from the capacitor goes to the ground lug.

STEP 7--Secure about 2 feet of 20ga. power cord to pin 1 and the ground. These are the leads which go to the battery. Mark the wire connected to the ground. This lead MUST go to the negative terminal of the battery. DON'T MAKE ANY MISTAKES!

STEP 8--Set the regulator circuit aside and connect the lugs of a mini-jack to the ends of about 6 inches of power cord.

STEP 9--Connect the lead coming from what will contact the tip of a plug when its inserted into the jack to pin 2 of the regulator chip. The end of the other conductor attach to one end of the fuse holder clip. Hook the opposite end of the fuse holder to the ground lug of the terminal strip using a short piece of wire.

STEP 10--Recheck your connections and solder them. Take care that solder flows around every lead completely.

STEP 11--Temporarily connect the battery leads to the battery. Be sure the ground goes to the negative terminal. Test voltage at the output jack with a volt meter. There should be $8\frac{1}{2}$ to 9 volts between the lugs on the jack. The lug representing the tip should be positive.

STEP 12--Remove the circuit from the battery and bolt the heat sink to the regulator.

STEP 13--Position the terminal strip in your enclosure. Mark and drill holes for both the output jack and a screw to fasten the strip. The heat sink must not touch the enclosure.

STEP 14--Attach the fuse holder to the base with a gob of rubber cement. Mount the terminal strip and jack. Put a fuse in the holder.

STEP 15--Cut a small notch in the cover to allow a pathway for the battery leads. Then put the cover in place.

STEP 16--Wire up the battery. Remember that ground goes to negative. Test the output voltage one last time. If it passes the smoke test, you're ready to try it on the computer.

STEP 17--Make a cable the length you need using the 20ga. wire. Put a mini-plug on each end. Be sure the tips of each plug are connected to the same conductor.

STEP 18--Locate the battery in a safe well ventilated place. Run the cable from the regulator to the computer power jack. Attach the charger and regulator to the battery. Plug the charger into a wall outlet.

You have just transcended the stress filled world of power failures and line glitches. Your computer is now battery powered.

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